CORE

The Voice of Mineral Exploration

Fall 2020

COVID-19:

Preparation and resolve in a pandemic

MAPPING INNOVATION IN MINERAL EXPLORATION

PDAC CONNECT: A NEW WAY TO SHARE INFORMATION

PDAC 2021 NEWS AND HIGHLIGHTS

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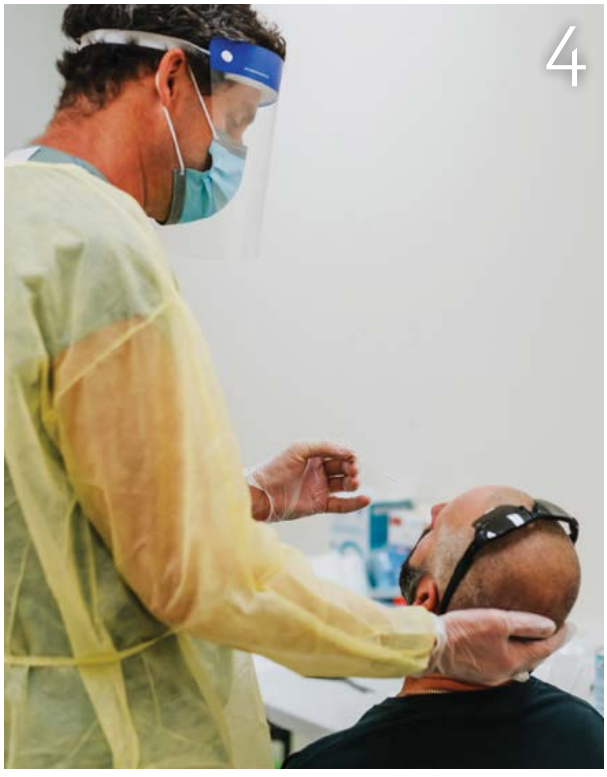

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ON THE COVER
On location in northern Manitoba at the exploration site of Willeson Metals Corps.

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INDUSTRY NEWS

GOVERNMENT SUPPORTS SECTOR WITH GEOSCIENCE INVESTMENT

Canada's Minister of Natural Resources, the Honourable Seamus O'Regan, **announced the government will invest $98 million over five years** to renew two flagship geoscience programs led by the Geological Survey of Canada: the Geo-mapping for Energy and Minerals program and Targeted Geoscience Initiative. PDAC recommended that both programs be renewed to support public geoscience work in Canada.

The Geo-mapping for Energy and Minerals program provides geoscientific knowledge of the immense untapped resources in Canada's North, and informs mineral resource opportunities in the context of a changing climate. The Targeted Geoscience Initiative provides next-generation geological knowledge and innovative techniques to target deeply buried mineral deposits.

Feds extend flow-through share timelines

As a result of PDAC advocacy, the Federal Department of Finance **proposed changes to Canada's flow-through regime** to allow issuers an additional 12 months under both the general rule and the look-back rule.

This will provide companies with operations that are impacted by COVID-19 additional time to incur eligible expenses, allowing them to safely plan when to best continue operations and to avoid costs from not meeting original flow-through share timelines. This initiative will protect the good, well-paying jobs that many Canadians depend on, including those in rural, remote, northern and Indigenous communities.

Manitoba launches minerals development fund

The Manitoba Chambers of Commerce (MCC) formally **announced the launch of the Manitoba Mineral Development Fund (MMDF)**, intended to jump-start mineral and economic development initiatives in the province with a specific focus on northern Manitoba. "The Manitoba Mineral Development Fund is up and running and we are proud to be fueling critical northern economic development," said Chuck Davidson, President & CEO of the Manitoba Chambers of Commerce, the organization that administers the fund. "In spite of COVID-19's significant economic impact, through this fund, we are able to make new and important financial investments in Manitoba's north."

The Province of Manitoba provided MCC with $20 million to establish the MMDF in October 2019, with an additional annual infusion of up to six per cent of revenues to be provided under *The Mining Tax Act*. Under the agreement, communities and businesses, including Indigenous groups, municipalities and the not-for-profit sector, are eligible to apply for funding.

Canadian Minerals and Metals Plan (CMMP) update

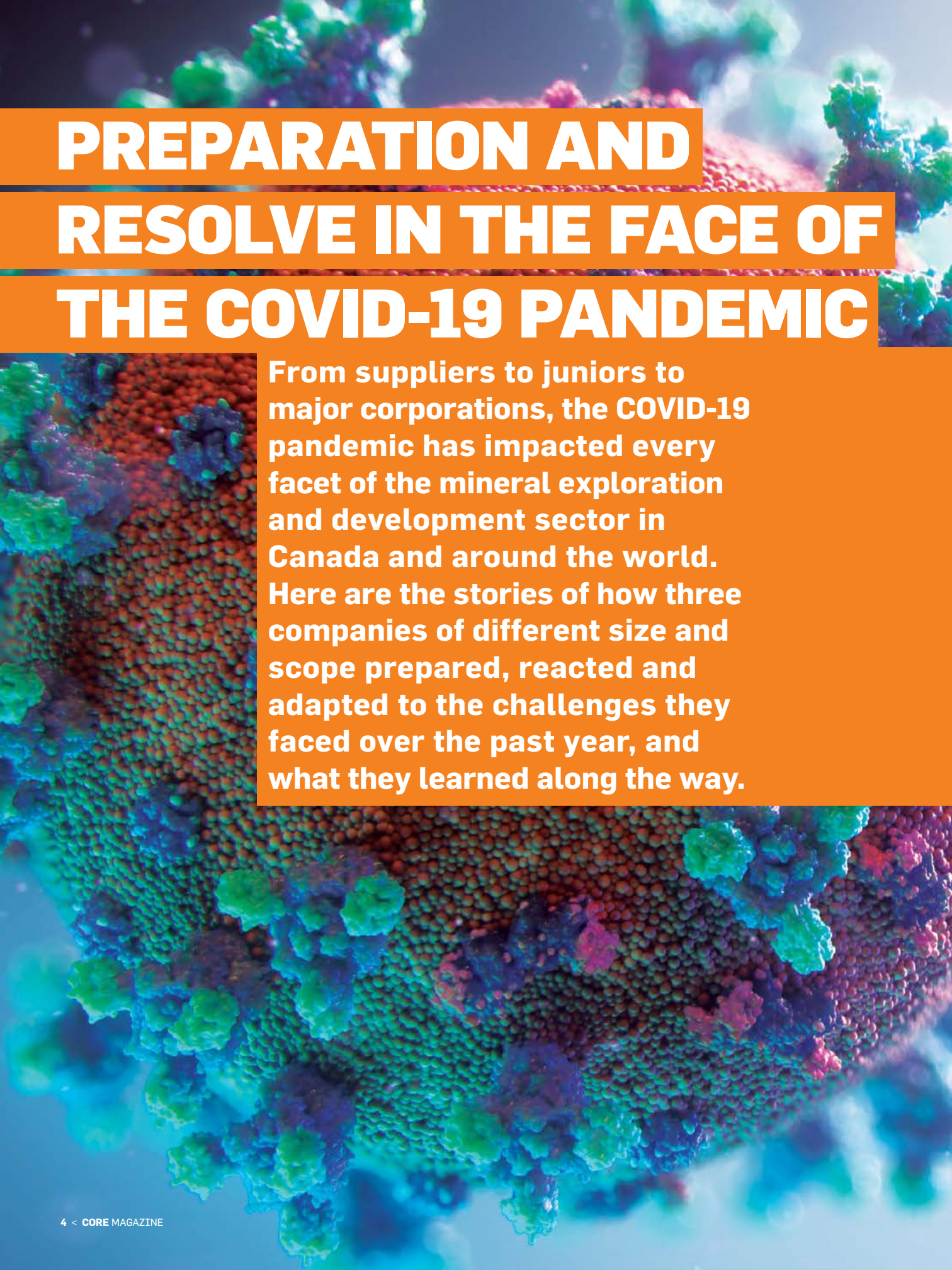
Building off the preliminary Canadian Minerals and Metals Action Plan (CMMP) launched at the PDAC 2020 Convention, Natural Resources Canada (NRCan) updated developments to their **Pan-Canadian Initiatives**, including new collaborations with industry and governments. Notably, the Federal Government has made strong progress to advance Canada's role in critical minerals. PDAC continues to engage with NRCan on CMMP and its related initiatives.

PDAC'S RECOMMENDATIONS FOR BUDGET 2021

To enhance Canada's mineral exploration and development sector, **PDAC provided eight recommendations for Federal Budget 2021** that will increase Canada's mineral industry competitiveness. As an industry that employs over 719,000 Canadians in rural, remote, northern and Indigenous communities, and contributes 5% to Canada's GDP, government action is critical to help the mineral sector continue to be a key driver of Canada's economy. Here are PDAC's recommendations:

1. That the government increase the Mineral Exploration Tax Credit (METC) from 15% to 30% in each province, and to 40% in each territory, until 2024, in conjunction with the five-year METC renewal in 2019, with a mechanism to extend it further.
2. That the government consider adding a "Force Majeure" clause into legislation that would provide a regulatory mechanism to suspend or defer the timelines associated with flow-through shares (FTS) in the case that an event such as the current COVID-19 pandemic reoccurs.
3. That the government equitably distribute the $98 million committed to the Targeted Geoscience Initiative (TGI) and Geo-mapping for Energy and Minerals (GEM) program over the next five years.
4. That in recognition of the recently announced investment towards geoscience initiatives, the government commit additional funding to identify, geologically map, and model critical mineral prospective regions in Canada.
5. That the government create a federal funding mechanism to help provincial and territorial governments undertake comprehensive mineral resource assessments, based on geoscientific studies, in order to understand and incorporate the value of mineral potential into land management decisions.
6. That the government establish an interdepartmental government-industry taskforce to investigate policy options and make recommendations to accelerate exploration and development of mineral resources critical for Canada's transition to a low-carbon economy.
7. That the government establish a broader mandate for the Economic and Finance Subcommittee Inter-Governmental Working Group (IGWG) to identify priority areas for regulatory modernization of the FTS regime, and commit to such a modernization initiative.
8. That the government commit to significant investments in housing, water, and access to high-speed internet, and others that contribute to improved health and educational outcomes and enhances engagement between government, the mineral industry and Indigenous communities under pandemic and post-pandemic conditions.

PREPARATION AND RESOLVE IN THE FACE OF THE COVID-19 PANDEMIC



From suppliers to juniors to major corporations, the COVID-19 pandemic has impacted every facet of the mineral exploration and development sector in Canada and around the world. Here are the stories of how three companies of different size and scope prepared, reacted and adapted to the challenges they faced over the past year, and what they learned along the way.

WILLESON METALS CORP.

Willeson Metals Corp. is a junior exploration company with gold projects in the Lynn Lake area of northern Manitoba. Willeson and its projects were spun out of Exiro Minerals, a private company focused on the discovery of Tier 1 mineral deposits. Willeson was incorporated this past year during the COVID-19 pandemic lockdown and is a PDAC Corporate Junior member. Answers to the questions were provided by Felix Lee, President & CEO.

WILLESON METALS

Q **The COVID-19 pandemic emerged without much warning. Did Willeson have any processes in place to assist in dealing with a crisis of this type? If so, what did they look like?**

A Willeson was incorporated at the end of March during the lockdown. As a new company just starting up its operations we had very little formal processes in place in advance of the pandemic, or at the onset of when it began, and certainly nothing in place to deal with something like a pandemic. Fortunately, given that the company was starting up, there were a small number of employees and no work in the field. We used the time to develop these processes.

Q **Tell our readers about your experience at the helm of a junior exploration company during a global pandemic. What have some of your personal experiences been?**

A Until coming aboard Willeson I had no prior experience running a junior exploration company. Most of my 30+ years in the industry have been on the consulting side of the business. So when I took the helm of Willeson at the onset of the pandemic and lockdown, I was presented with two sets of challenges: 1. The typical challenges that come with starting up a new company; and 2. The challenges—the uncertainties—that have come about as a result of the pandemic and lockdown. It has certainly been an interesting experience to say the least.

Q
A

Were there particular challenges that stand out to you?

The first very big challenge was trying to communicate with the new team at Willeson—a new Board of Directors, a new management team, and a new technical team. Working from home under lockdown has made it hard to get to know my new colleagues. Meeting over Zoom is very limiting compared to having the opportunity to meet with, and work with, your colleagues in-person. We've been in operation now for seven months and I've actually only met my CFO, Stephanie Hart, in-person twice!

A second, even bigger, challenge was finding a way to communicate effectively with the company's stakeholders. As the new kid on the block in Lynn Lake, northern Manitoba it was vitally important to introduce ourselves and the company to the local community as soon as possible, and in particular the Indigenous community. Unfortunately hosting in-person meetings was not possible due to the lockdown, and neither was video-conference calls due to a lack of internet connectivity in Lynn Lake. Everything has had to be done by old fashion telephone.

Lastly, it was a challenge deciding how much financing to raise, in particular flow-through financing. It was uncertain what impact the pandemic and lockdown would have on our ability to carry out our exploration programs. Before the Federal Government extended flow-through spending deadlines, we were concerned about raising and then not being able to spend flow-through funds, and getting penalized as a result. The possibility of not being able to carry out our exploration programs brought about the added concern of whether or not we would be able to keep some of our mineral claims in good standing. While the Government of Manitoba eventually extended assessment filing deadlines for certain claims, there was a period of considerable uncertainty that Willeson and other junior exploration companies experienced.

Q
A

How has Willeson prioritized its company vs. community obligations during the pandemic?

That's a good question. Short answer, at Willeson we see company and community priorities as one and the same. For Willeson, it's important that we conduct our exploration efforts in a safe, sustainable and responsible manner. While we hope to find a deposit, we also want to leave the communities in which we work in a better place compared to when we first arrived. That is an attitude and value I hope to ingrain in the company's culture and DNA. If Willeson wants to be a long-term partner, the onus is on us to align with a community's needs and priorities.

Q
A

Let us pretend that a COVID-type crisis happens again in the future, what are some of the learnings from this pandemic that might assist you?

Speaking to the challenges in regards to communications, effective communication with the team is critical. It's essential to have business continuity measures in place and the ability to effectively communicate and work together from various offsite locations. In addition, the pandemic has reminded us of the importance of having clear policies and procedures in place to ensure that employees and contractors are able work safely in both the field and office environments.

Q

How have you managed engagement with local and Indigenous communities during the pandemic Do you expect to see any long-term changes to the way Willeson does business because of the pandemic?

A

As mentioned before, the lockdown precluded the possibility of face-to-face, in-person meetings with local and Indigenous communities, so it has been challenging that way.

In terms of long-term change, however, the pandemic has actually served to shift conversations between Willeson and an Indigenous community away from business matters to focus on some very basic things—things that many of us take for granted. The Indigenous community we are working with is a young community, and we found out during our initial call with them that they were having difficulty securing basic necessities such as diapers and baby formula as a result of the pandemic lockdown. This came somewhat as a shock to us and made us more aware of the struggles that many northern communities go through on a daily basis. It has also made us more aware of the role that Willeson can play to help the communities within which it operates and the message couldn't be more clear: We can't expect to have effective engagement with, and participation from, a community that is focused simply on trying to meet the basic needs of its members.

Q

What are some of the additional health and safety steps that have to be undertaken now? Were there any operating guidelines provided by governments or did you need to develop protocols?

A

Like almost everyone, we have learned to be much more mindful of the need for good health practices and proper social distancing. The guidelines that government has set are very basic. Every project situation is going to have its unique challenges that need to be addressed and overcome. Next year we will get into the field and put our newly developed procedures into action. Willeson will also be looking to its peers in other parts of Manitoba and Canada to see how they are conducting their exploration programs and running their exploration camps. There is a lot to be learned from what others are doing and finding out what is working well and what isn't.

Q

Hindsight is always a wonderful thing. If Willeson could go back to the beginning of the pandemic with the knowledge it has now, is there anything it would do differently?

A

Ensuring from the outset that we have appropriate communications capabilities in place and therefore the means for our team, contractors and local residents to effectively communicate and work with one another. Furthermore, that we are proactive in ensuring our employees, contractors and various other stakeholders, in particular the local and Indigenous communities, receive whatever assistance they need to deal with a situation like the pandemic and lockdown we are currently experiencing.

Q

Has Willeson recognized any opportunities from the pandemic?

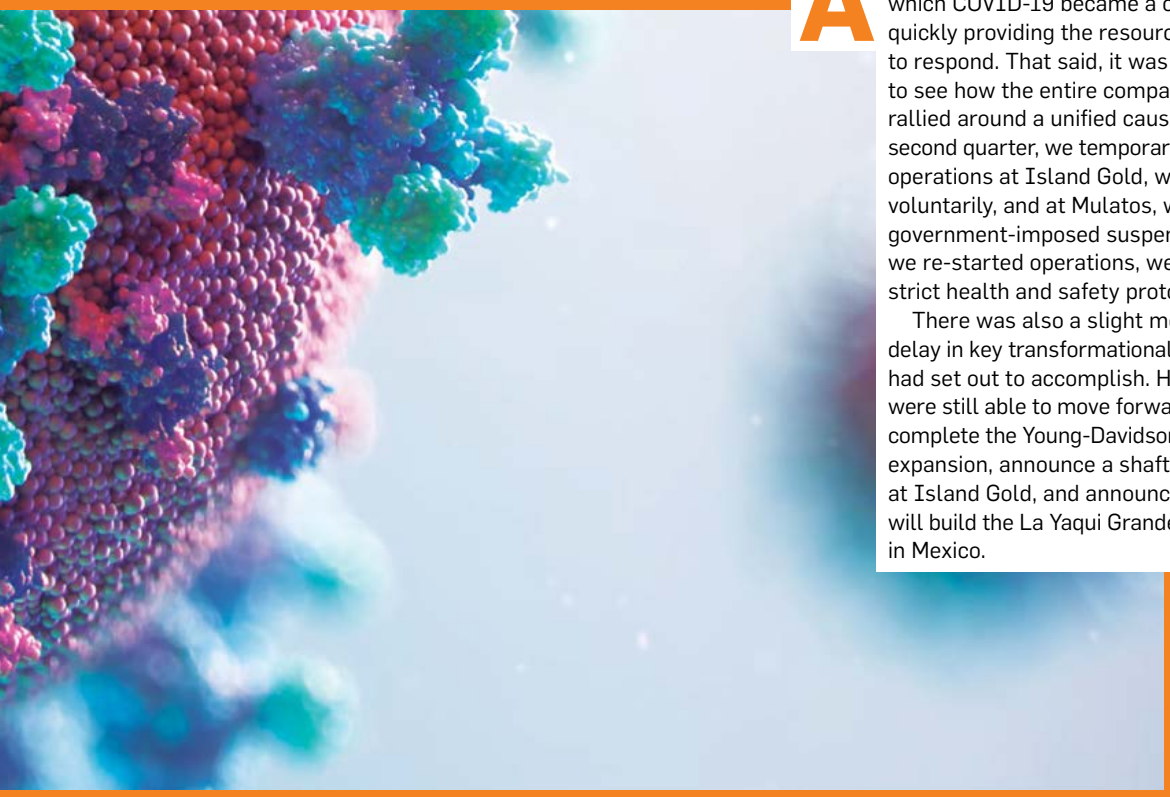
A

As I alluded to earlier, the opportunity has really been on the Indigenous engagement side as the pandemic has brought forth conversations between the company and the community that might have otherwise been focused solely on business matters. We have become a little more cognizant of the basic challenges northern and Indigenous communities face every day, and the things that are important to the community in the here and now that are often too easily overlooked. Through knowing what we know now, we have the opportunity to make a difference for ourselves and the communities within which we work and it's entirely up to us to seize that opportunity.

ALAMOS GOLD INC.

Alamos Gold Inc. is a Canadian-based gold producer that was formed in 2003 through the merger of Alamos Minerals and National Gold. The company currently has three operating mines—two in Canada and one in Mexico—along with development stage projects in Canada, Mexico, Turkey and the United States. The company has been a PDAC member for 18 years and is currently a Corporate Class A member. Answers to the questions were provided by John McCluskey, CEO.

ALAMOS GOLD INC.



Q **The COVID-19 pandemic emerged without much warning. Did Alamos have any processes in place to assist in dealing with this type of crisis?**

A The benchmark of success during COVID-19 was creating a virus-free environment company-wide, and despite this being a real-time worldwide emergency, we were laser-focused on implementing solutions.

Fortunately, Alamos had a solid foundation to work from. Several years ago, we launched our flagship safety program Home Safe Every Day, which has become a key part of our workplace culture across the company. The program reinforces awareness of safety tools and attitudes, risk detection, and safety analysis in routine and non-routine tasks. We were therefore able to adapt to COVID-19, in terms of having processes and protocols in place, to quickly work towards the goal of a virus-free environment. We instituted a variety of measures across our operations with our foremost priority being the health and safety of our employees, their families and our host communities.

Q **What are some of the challenges Alamos experienced between its operating mines and development projects?**

A A common challenge was the speed at which COVID-19 became a crisis, and quickly providing the resources necessary to respond. That said, it was impressive to see how the entire company quickly rallied around a unified cause. In the second quarter, we temporarily suspended operations at Island Gold, which was voluntarily, and at Mulatos, which was a government-imposed suspension. Once we re-started operations, we did so under strict health and safety protocols.

There was also a slight month-long delay in key transformational initiatives we had set out to accomplish. However, we were still able to move forward by July to complete the Young-Davidson lower mine expansion, announce a shaft expansion at Island Gold, and announce that we will build the La Yaqui Grande gold project in Mexico.

Q
A

Did Alamos have different experiences between jurisdictions? For example, how do the challenges compare in Canada to those in Mexico or Turkey?

Each jurisdiction has had differing policy, regulatory and legislative responses specific to the mining industry, including whether mining operations were seen as an essential service. This has required us to adapt accordingly, although our teams responded well within the context of creating a virus-free environment for our workforce. We set out to be on the forefront of using the best screening technologies at our operating mines, and we introduced rapid and reliable diagnostic screening tests at our sites with camps to help quickly identify asymptomatic carriers of COVID-19. The Government of Mexico has been more flexible than the Government of Canada in their approval of screening and testing technologies, however in both countries we have been able to move forward with this important screening tool. We also continue to look to evolve our testing capability.

Q
A

Do you expect any long-term changes to the way Alamos does business because of the pandemic?

We don't expect the fundamentals to change. We will still work to achieve operational excellence, while achieving the highest health and safety standards. With the approval of a proven vaccine, we anticipate our protocols will evolve and we can reduce the need for screening tools. However, as this pandemic has shown, nothing can be taken for granted and we must always be ready to keep our workforce and communities safe and make the investments required to do so. In addition, our Home Safe Every Day training will incorporate best practices that we have learned during this crisis. I also anticipate that collaboration and the sharing of best practices across our industry will be vital over the long term.

Q
A

How has Alamos prioritized its company vs. community obligations during the pandemic?

From the moment this crisis escalated, we were laser-focused on ensuring we protect the health and safety of our employees and the communities in which we operate. That is why, for example, we temporarily suspended operations at Island Gold in late March, as approximately 50% of the workforce fly-in from various other regions. We made this voluntary decision to help prevent the potential spread of COVID-19 between these various communities.

We also stepped up early on to provide community support, and our teams in Canada, Mexico and Turkey donated their time, medical supplies, food supplies and funds to support local communities. For example, our medical clinic that we built in Matarachi, Mexico has been vitally important for our team to provide additional community care support during this crisis.

Q
A

How do you balance corporate vs. community and individual concerns during a pandemic? Does the share price even matter during this type of crisis?

We are in the midst of this unprecedented worldwide pandemic, and the tools and systems to protect people are constantly evolving. Our priority remains to stay on top of tackling this unprecedented disease as best as possible, to achieve a virus-free workplace, limit its spread, and support safe and healthy communities. We devote a significant amount of time and resources to collaborate and communicate internally, as well as with local public health units and our host communities.

Q
A

Has the combination of COVID-19 and the simultaneous spike in the market created opportunities for the mineral exploration and mining industry?

The rise in gold prices has certainly brought more interest to the sector and industry. It has also created opportunities for some companies to raise capital and pursue exploration programs and projects that they would not have been able to do otherwise. For companies like Alamos, the higher gold prices have not altered our decision making with respect to our organic growth opportunities, as we use much more conservative gold price assumptions, but it has increased our profitability which will in turn support higher returns to shareholders.

Q
A

What are some of the additional health and safety steps that had to be undertaken on site to prevent COVID-19? Was there specific guidance from governments?

We have followed the guidance of the local public health units to implement and reinforce the highest health and safety standards made available. Our COVID-19 emergency response measures include temperature screening, physical distancing, cleaning and sanitization, contact notification, quarantine if required, and at our two sites with camps we have introduced diagnostic screening tests. We continue to look for the best ways to keep our workforce and communities safe, with guidance from government and input from our workforce and local communities. As required, we will continue to evolve our COVID-19 protocols and measures as new methods and technologies are approved and available.

Q
A

Hindsight is always a wonderful thing. If Alamos could go back to the beginning of the pandemic with the knowledge it has now, is there anything it would do differently at its Canadian operations?

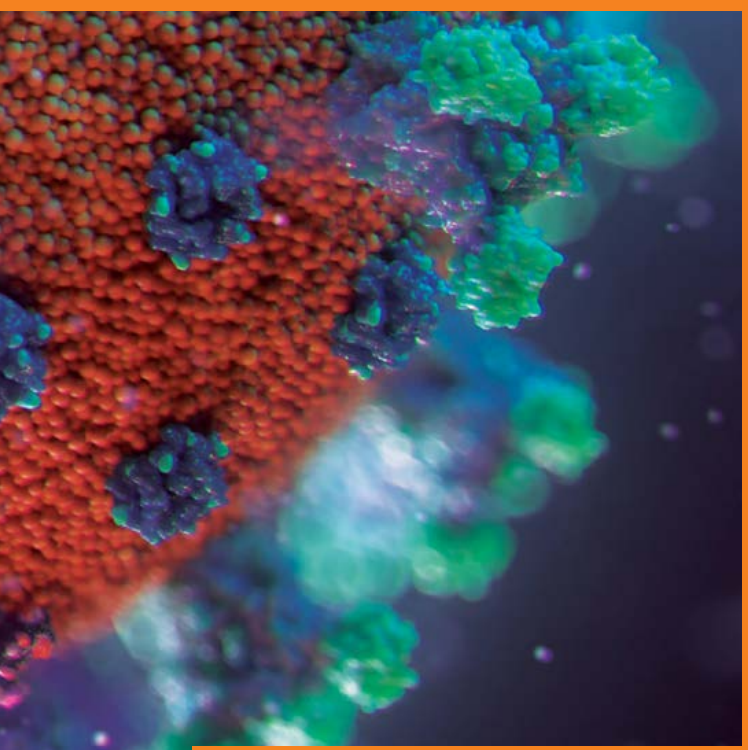
With the emergence of COVID-19, Alamos was very proactive across the company implementing increasingly strict health and safety protocols. We were very cautious, and did invest the resources needed. This included stepping up as one of the first companies in Canada to implement testing at Island Gold. We acted very early to put systems in place to protect health and safety of our workforce, with the best available information, and to date, we have been successful at not having any cases at our Canadian operations.

In addition, we introduced medical screening for all personnel; cancelled non-essential business travel; required two-week quarantine for employees returning from out-of-country travel; introduced strict hygiene protocols at mine camp and sites; introduced social distancing measures to limit interactions; and limited site access to essential workers.

AGNICO EAGLE MINES LIMITED

Agnico Eagle Mines Limited is a senior Canadian gold mining company that has produced precious metals since 1957. The company has operating mines in Canada, Finland and Mexico, with exploration activities in each of these countries as well as in the United States and Sweden. The company has been a PDAC member for 12 years and is currently a Corporate Class A member. Answers to the questions were provided by Carol Plummer, Senior Vice-President, Sustainability.

AGNICO EAGLE



Q A

The COVID-19 pandemic emerged without much warning. Did Agnico have any processes in place to assist in dealing this type of crisis?

Preventing and managing the spread of contagious diseases is essential for protecting our workers and keeping our operations running smoothly. Each of our operations already had plans and protocols in place to maximize prevention and decrease the spread of illnesses.

Our teams across our global divisions worked in collaboration with each other, as well as with local employees, communities, public health authorities and government agencies, to ensure appropriate protocols and safety precautions were implemented, and to be able to respond quickly as the situation evolved.

Agnico's pandemic response protocols have been updated to ensure that if an employee is suspected to have COVID-19 clear procedures for isolation, testing, transportation, workplace sanitization, and contact tracing are in place.

Q A

What are some of the challenges Agnico experienced between its operating mines and exploration projects?

The COVID-19 pandemic evolved rapidly. The biggest challenge in the beginning was the speed at which information was changing and decisions needed to be made.

We transitioned many employees to tele-remote work in the beginning of the pandemic and many of them continue to work from home. Our exploration sites suspended work for a few weeks until appropriate measures could be implemented to ensure the safety of the workers.

From the beginning, our priority was to look after our people and support the communities surrounding our operations as best we could.

Q
A

Did Agnico have different experiences between jurisdictions? For example, how do the challenges compare in Canada to those in Mexico or Finland?
In Québec, the government mandated the suspension of operations for three weeks. The Government of Mexico mandated a similar production suspension. During this time, our employees were sent home with pay while skeleton crews maintained the sites. We developed, implemented and communicated appropriate measures and protocols for protecting our employees, and we were able to restart our operations safely once government regulations allowed.

In Nunavut, where the communities are more vulnerable, we sent our northern-based Inuit employees home and completely isolated our operations from the communities starting in March in order to minimize the potential for COVID-19 to enter the communities.

In Finland, our operations were not interrupted. However, travel restrictions have impacted contract employees arriving from elsewhere in Europe and Canada to work on the shaft construction and mill expansion project resulting in some delays.

Although we maintained employee pay during the production suspensions, and continue to provide pay to our Nunavummiut employees, it is only natural that the ongoing uncertainty created a lot of stress for employees, their families and communities. We increased support for communities, with donations of food, hygiene and medical supplies, along with other assistance specific to the needs of the communities.

Q
A

The combination of COVID-19 and a near-simultaneous spike in the market seems to be competing forces for the mineral exploration and mining industry. How are these competing forces influencing your longer-term planning?
Our long-term vision has remained the same for over six decades and we continue to operate and grow in a measured and responsible way.

Q
A

Agnico is known for its significant efforts in community relations. In fact, we recognized Agnico with the PDAC 2020 Sustainability Award for developing a strong Inuit workforce and supporting the Kivalliq region of Nunavut here in Canada. How has Agnico managed engagement with local and Indigenous communities during the pandemic?
In mid-March, after extensive discussions with government, Inuit and community leaders, we took the precaution of sending our entire Nunavut-based workforce home in order to reduce the chance of the virus spreading to the local communities. During this time, we have maintained 75% of their base salaries and we continue to discuss with the Government of Nunavut on a process that will allow our Nunavummiut employees to safely return to work.

Agnico also provided monthly food hampers to families in need across all seven hamlets in the Kivalliq region, as well as lunchboxes for kids, and provided Personal Protective Equipment and sanitization supplies to the hamlets of Baker Lake and Rankin Inlet to support their pandemic plans and emergency response capacity. We also provided financial support towards community radio in the hamlets of Baker Lake and Rankin Inlet so they could maintain popular community radio programs during self-isolation periods.

Q
A

How has Agnico prioritized its company vs. community obligations during the pandemic?

During this global crisis, fulfilling our corporate responsibilities has never been so challenging or so critical to our collective social, economic and environmental well-being. We will remain a strong and efficient operator, a thoughtful employer and an unwavering supporter to our local communities and governments.

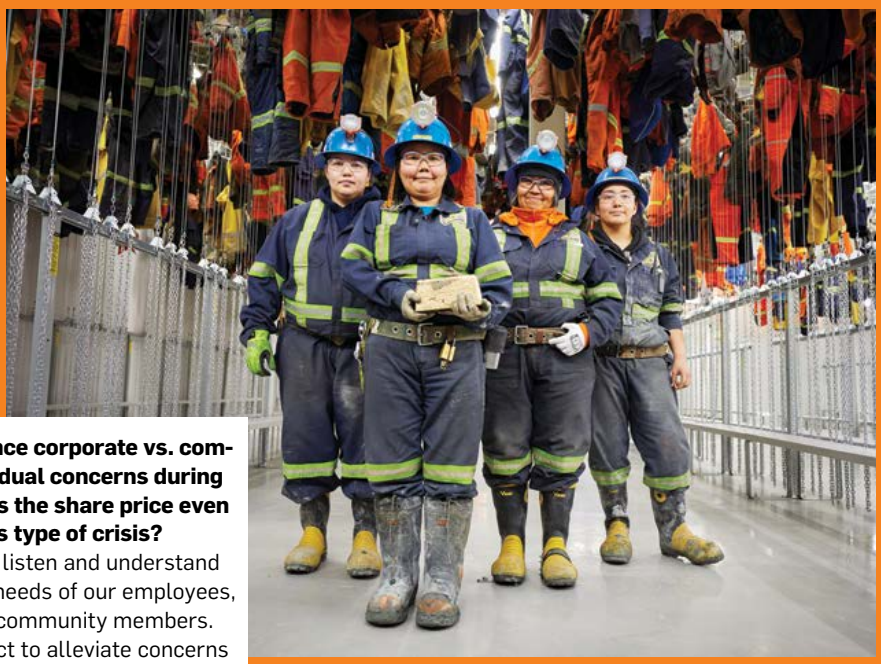
- Protecting our employees: Agnico is sparing no effort to support our employees, both physically and financially. We have taken extraordinary measures to continue improving our hygiene protocols and the protection of our workers from COVID-19.
- Protecting our communities: We are working closely with community authorities and businesses to support the most vulnerable and to provide critical health, safety, food and other supplies where the need is greatest. For example, in Mexico, the mine's medical doctors have been working out of health centres in the surrounding communities where they are able to assist local patients, as well as making home visits to ensure vulnerable community members receive appropriate medical attention.
- Protecting our operations: While production at several operations was impacted for a few weeks early in the pandemic as we temporarily reduced activities, we have the financial strength and resilience to weather this pandemic and to protect the continuity of our business. We maintain the highest standards in order to provide a healthy and safe working environment in each of our operations, now and for the future.

Q
A

What are some additional health and safety steps that had to be undertaken on site to prevent COVID-19? Were there specific/requirements from governments?

Agnico has implemented health, hygiene and physical distancing measures that meet or exceed the requirements of local and national governments and Public Health authorities. A key point is screening before transportation to site or at the site entry point to prevent people at risk of spreading COVID-19 from accessing the site. Some of the measures include:

- Control points at site entry and testing: Detection of body temperature and screening of all workers, suppliers and visitors arriving on site, including a mandatory health and travelling questionnaire, and strict return to work and isolation protocols. All employees travelling to camp-based sites are tested prior to embarking on chartered planes or buses.
- Staggered shift start-times and strict physical distancing measures: At site entry, at the beginning and end of shifts, at the supervisor wickets, and in the cages separation zones control of the number of workers in high traffic areas and facilitate physical distancing to minimize the risk of transmission.
- Tele-remote working: Tele-remote working was implemented across the organization for all employees able to work remotely.



Q

How do you balance corporate vs. community and individual concerns during a pandemic? Does the share price even matter during this type of crisis?

A

The first step is to listen and understand the concerns and needs of our employees, their families and community members. The second is to act to alleviate concerns and provide help where possible.

Agnico will continue to go above and beyond to protect the health and safety of our employees and our local communities, and to keep our business strong. We will remain a strong and efficient operator, a thoughtful employer, and an unwavering supporter to our local communities and governments. We will continue to act quickly and do the right thing, remaining as agile and resilient as possible in order to face the future with confidence.

Q

Hindsight is always a wonderful thing. If Agnico could go back to the beginning of the pandemic with the knowledge it has now, is there anything it would do differently at its Canadian operations?

A

We believe efficient hygiene and physical distancing measures, as well as screening and testing, are key to preventing the spread. One thing that our team in Nunavut did extremely well was to act on their vision to implement testing for the virus early in the pandemic with a pilot project that has become part of the routine of flying to camp to start each rotation.

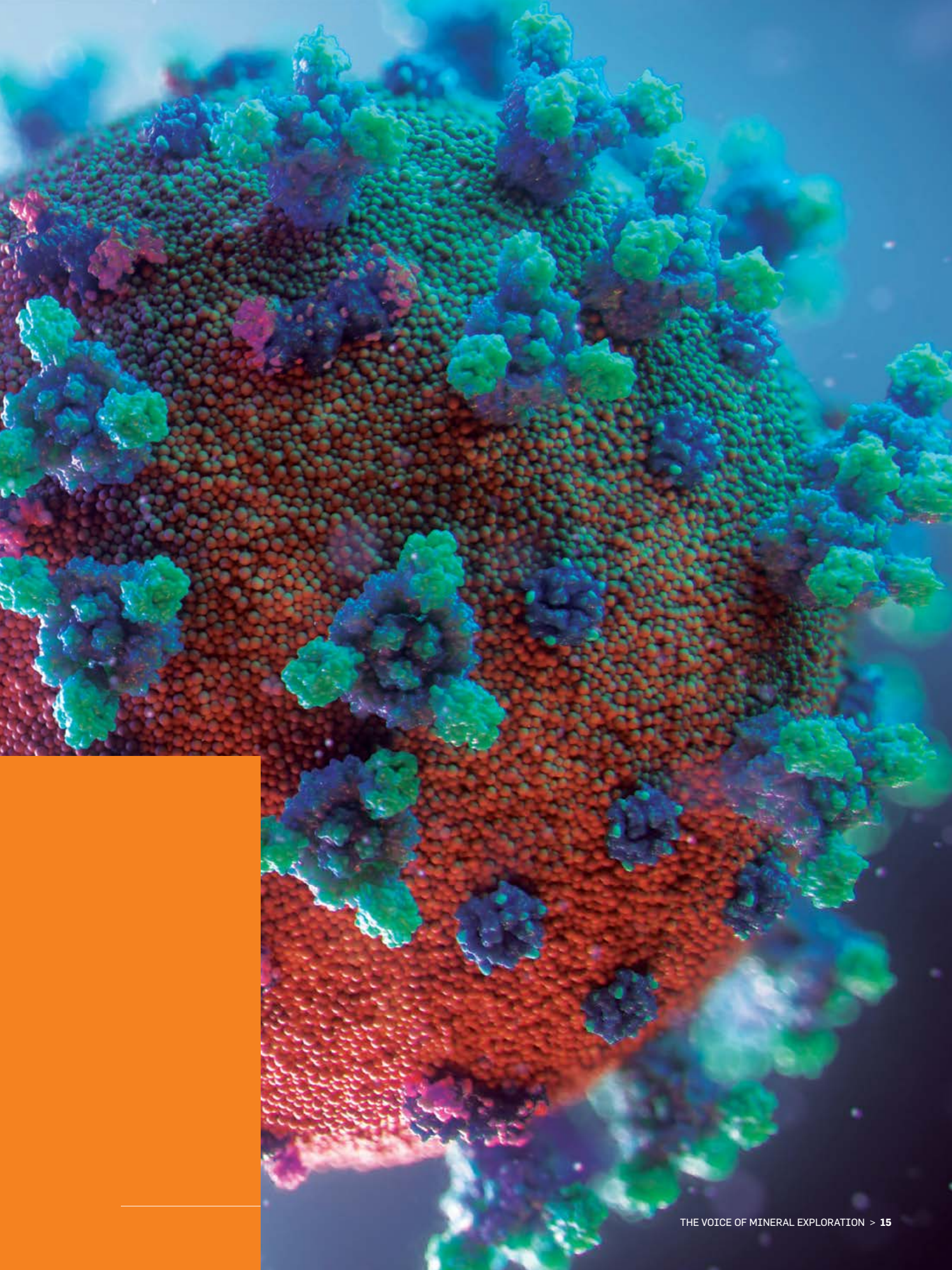
If mobile testing solutions would have been available right from the start, we would have implemented them even earlier on.

Q

Do you expect to see any long-term changes to the way Agnico does business because of the pandemic?

A

The pandemic will certainly change some aspects of our business. For example, we have seen the benefits and the challenges of tele-remote working for corporate, technical and support staff. In fact, we created a working group to assess the tele-remote working experience, harness lessons learned and make recommendations that can improve efficiency, work-life balance and employee engagement in the long term.



PDAC
2021

The World's Premier Mineral Exploration & Mining Convention

We are pleased to announce that our annual PDAC Convention—the world's premier mineral exploration and mining event—will be entirely virtual in 2021 for the first time in its 89-year history. As the COVID-19 pandemic continues to affect travel and major gatherings, we recognize that staying connected is more important than ever for members, exhibitors, sponsors, attendees and numerous partners. The decision to move forward with a virtual event offers a safe and innovative solution for the industry to access our outstanding programming, investment and networking opportunities.

The Convention will take place from March 8-11, and you can join us from anywhere in the world. In the meantime, please visit our website for more information. We are excited to welcome you to our iconic PDAC 2021 Convention in a new virtual setting.

PDAC

2021

THE WORLD'S PREMIER MINERAL EXPLORATION & MINING CONVENTION

MARCH 8-11

VIRTUAL CONVENTION

JOIN FROM ANYWHERE IN THE WORLD

REGISTER AT pdac.ca/convention
#PDAC2021

HOW THE PDAC VIRTUAL CONVENTION WORKS

The Convention will take place within a virtual venue called a platform, comparable to a physical venue. Event components that attendees would traditionally experience in-person will be presented virtually. A virtual convention offers attendees more benefits than ever before!

GLOBAL CONNECTIONS

Access to a broader global audience and even more valuable business connections with thought leaders, investors and industry colleagues worldwide.

MATCHMAKING

Facilitated matchmaking based on all participants' interests in order to deliver the most focused networking experience.

EXPERIENCE THE ONLINE EXHIBIT HALL

Discover solutions that help push your business forward, book meetings with leading companies and chat with exhibit staff.

MUCH MORE THAN A WEBINAR

Attend various interactive presentations with breakout sessions, group discussions and be among your peers, just like being in the room together.

BROADER ACCESS

Accessed from all mobile and desktop devices, all you need is an internet connection. Attend virtual networking lounges, educational sessions and entertainment all from the comfort of your home or office.

SPONSORSHIP OPPORTUNITIES

Connect with your target audience and showcase your organization to key stakeholders through our comprehensive digital sponsor marketing programs. PDAC 2021 Sponsorship offers strategic opportunities to meet your marketing objectives, build business relationships and engage with our attendees through diverse pre-convention and virtual event marketing initiatives.

Our Sponsors Receive:

- Customized programs providing opportunity for targeted activations and attendee engagement
- Corporate presence in convention marketing materials distributed to over 30,000 international industry professionals
- Corporate presence in the official PDAC Convention program
- Recognition on the PDAC Convention website, with a direct link to your company website—over 300,000 unique visits per year
- Digital marketing campaigns on the PDAC 2021 virtual platform
- Brand exposure in various industry publications

Contact Christina Goncalves Toste, Convention Sponsorship & Partnership Development at **sponsor@pdac.ca** for more information and program availability.

EXHIBIT OPPORTUNITIES

Core Shack
This is a venue for companies to display the world's latest core. Showcase your company's exciting drilling, trenching or outcrop samples with your fellow explorers and developers.

Investors Exchange
A hub for junior exploration and major mining companies, mid-sized producers, prospectors and financial institutions to virtually connect with investors from around the world and seek out new business opportunities.

Prospectors Tent
This is a great opportunity for self-employed or independent prospectors to display maps, samples and claim results.

Trade Show
The Trade Show is where organizations and governments showcase the world's leading technology, products, services and mining jurisdictions. A place to connect with decision makers and promote brand awareness to a worldwide market.

Learn more at **pdac.ca/convention/exhibits**

PRESENTATION OPPORTUNITIES

Corporate Presentation Forum for Investors
Featuring up-to-the-minute information on select exploration and development companies' current activities and investment potential.

Learn more at **pdac.ca/convention/cpfi**

Cutting Edge
Unique and innovative concepts are presented in a short five-minute presentation format. If you want to present sharp and punchy ideas, then this forum is for you.

Learn more at
pdac.ca/convention/programming/cutting-edge

Exploration Insights
For speakers who wish to present their technical, policy or academic abstract in a forum outside the Technical Program. All interested individuals including academics and graduate students are welcome.

Learn more at **pdac.ca/convention/programming/exploration-insights**

Letter Writer Presentations for Investors
Are you an industry commentator and would like to present your market research and ideas on how to select profitable investments in the resource sector? If so, then you should apply!

Learn more at **pdac.ca/convention/letterwriterpresentations**

NETWORKING OPPORTUNITIES

Visit **pdac.ca/convention/networking-events** for the latest info on these must-attend events.

OPENING CEREMONIES
Join Felix Lee, PDAC President, and other special guests as we mark the official opening of the 2021 Convention in a virtual setting.

PDAC AWARDS GALA
The PDAC Awards Gala celebrates excellence in the mineral exploration and mining industry. Your opportunity to connect with Award recipients via live chat—the perfect setting for unlimited networking!

CLOSING CEREMONIES
After four exhilarating days at the world's premier mineral exploration and mining convention, it's time to enjoy some virtual entertainment!

SAVE THE DATE!

MARCH 8 - 11, 2021

VIRTUAL CONVENTION
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pdac.ca/convention | convention@pdac.ca

PDAC 2021 THE WORLD'S PREMIER MINERAL EXPLORATION & MINING CONVENTION

PDAC CONNECT

Information sharing in a new age

At the best of times, a national organization's ability to effectively communicate with its membership base is essential to the overall health and prosperity of the sector it represents. At the worst of times, effective communication can make the difference between members surviving or becoming extinct.

The spread of COVID-19 and the post-pandemic landscape that is emerging in its aftermath is changing the way global industries operate. The changes, which are expected to play out for years to come, highlight the resilient ways in which people, organizations and businesses adapt in the face of unforeseen challenges and adversity.

In the wake of the pandemic there has also been an even greater appreciation for just how important it is to establish robust communication platforms and vehicles that are expansive, inclusive, easy to access, and that nurture the exchange of ideas that can create positive change.

With more than 7,000 individual and corporate members in every corner of the world, PDAC's membership base is wide and varying. The association represents geoscientists, students, academics, government, service and equipment suppliers, retired professionals, lawyers, financiers, prospectors, exploration and mining companies, and so on.

Through various communications tools and platforms such as social media, digital media, advertising and print publications PDAC's reach can exceed 100,000 people on a daily basis, especially during the annual PDAC Convention. An impressive number, but one that comes with a catch: the exchange of information is mainly one-sided. PDAC shares information—some of it vital to the day-to-day operations of its members—with the hope that members see it, understand it, take action if necessary, and are able to easily share it within their own ranks and networks. That's a lot to ask for in this age of information overload, much like throwing a penny into a fountain and hoping a wish comes true.

In an effort to overcome this hurdle and further increase member engagement and interaction on key issues shaping the mineral exploration and development sector, PDAC has launched a variety of new platforms over the past few years, including live webinars and online blogs, that explore various topics and allow the

listener or viewer to participate in real-time. In going a step further, the association has now launched a new platform, called PDAC Connect, that goes beyond anything the association has done in the past.

Launched this past May, PDAC Connect is an interactive, online forum that enables members to engage and connect directly with other industry professionals in order to have focused discussions on topics of shared interest. The forum is open to all 7,000+ members—wherever they are located—who are interested in sharing information, seeking advice, or exchanging resources and building networking channels from wherever they operate.

In addition, the forum provides a place to share information with like-minded individuals, discuss opportunities for business development, and is designed to support simultaneous venues with focused conversations that can be expanded into private communities and evolve as new issues and developments affecting the industry arise.

Currently, a number of PDAC committees are using the platform to stay connected, including the association's Convention committee, which is preparing all programs, courses, logistics, events, speakers and networking opportunities for the PDAC 2021 Convention that will be entirely virtual this upcoming March.

A new job board is also featured on the forum, free of charge to all members, and people are encouraged to utilize the space to showcase current success stories and key projects, along with new discoveries and innovations, major announcements and M&As, and awards and recognition for leading companies and individuals.

Going forward, PDAC Connect will expand its offerings even wider to include live Q&As with industry experts, in-depth discussions and analysis on developments and news items the association is tracking, in addition to showcasing research projects and reports that can help companies in their exploration activities and business relationships.

The possibilities for how far PDAC Connect can help members and the industry going forward is limitless, just as much as the timing for staying informed and connected is as critical as ever.

PDAC CONNECT

GETTING STARTED

1. **Sign In** Login to "connect.pdac.ca" with your existing user credentials.
2. **Complete your profile** Upload a photo and share information about yourself and your business.
3. **Join communities** Keep up with conversations on the topics that interest you. All members are auto-subscribed to the PDAC Open Forum community. To manage the frequency of emails, visit My Profile and click on "Community Notifications" under My Account.
4. **Build your networks** Perform an advanced search in the "Directory" to connect with fellow members and establish new business contacts based on similar interests and criteria.
5. **Post messages** Browse "Discussion Posts" to participate in conversations and post new messages in your communities.
6. **Share resources** Browse "Library Entries" to view shared documents and upload new library entries for discussion and feedback.

MAPPING INNOVATION IN MINERAL EXPLORATION

Mineral exploration is unquestionably part of modern society and is underpinned by fundamental science and evidence-based processes. The mineral resources needed for a low-carbon future are more likely to be deeper or hidden in areas of exotic cover. In order to be successful in this environment industry is innovating, creating new tools, approaches and techniques.

To gauge the current innovation landscape in mineral exploration across Canada, PDAC embarked on a review of companies and organizations that created and implemented successful projects or products. Over 30 hours of interviews were conducted to investigate specific innovations and shed insight on the current state of innovation in mineral exploration. Our **full report** includes eleven case studies ranging from 'big think' collaborative research efforts, to process-related advances in field data collection, diamond drilling and core logging, and the use of Machine Learning (ML) and Artificial Intelligence (AI) in data integration and analytics.

What our report uncovers is that there are common turns and experiences on the path to successful innovation, but that there is no defined route from A to B. Innovation thrives in a landscape that provides access to quality university research and people, public geoscience provided by governments, geological surveys and other organizations, research consortia-networks, and industry partners.

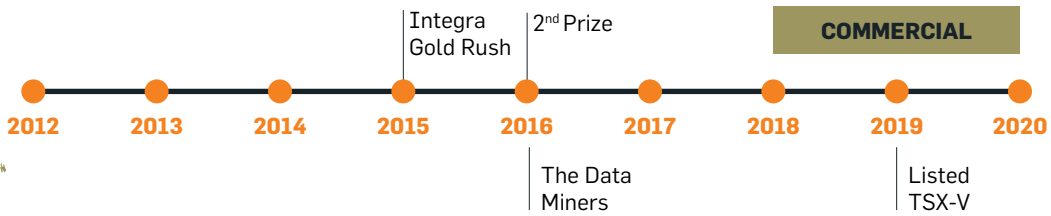
Small, more agile companies and consultants operate effectively within this innovation landscape, furthering initiatives by major companies to achieve exploration success and improve operational efficiencies. They are supported by funding from various sources, and often through government grants that may help reduce risk and bring in outside knowledge. Ultimately, carrying an innovation through to commercialization requires a champion and, perhaps most importantly, a larger corporation to be an early adopter.

Modern discovery requires a complex and inter-related series of processes that continually feed into each other. 'Boots on the ground' mapping and sampling is still fundamental to exploration, requiring technical geological expertise. What has changed is that there is a fast-growing variety of new tools and approaches that allow large and diverse data sets to be collected and analysed with increased precision. Canadian companies are leading in shaping this modernized approach to mineral exploration, building on technical expertise and strengths that will benefit us all.

"Innovation occurs across our business in both technical and scientific methods and via new approaches to community engagement—addressing risks early in a project can have lasting impact"

—Gavin Dirom, President & CEO, Geoscience BC

FROM DATA MINERS TO TSX-V



KEY PARTICIPANT
GoldSpot Discoveries Corp.

DRIVERS
- Target Generation
- Data Integration

KEY FACTORS
- Outside Expertise
- Funding
- Prize

THE PROBLEM

The 'Data Miners' were big news in 2016, coming in second to SGS in the Integra Gold Challenge. The team, however, were a group of students based in Quebec and British Columbia, with no formal industry connections. Was it possible to capitalize on the talent and abilities of the young team, while also helping to solve the problem of finding mineral resources?

THE INNOVATION

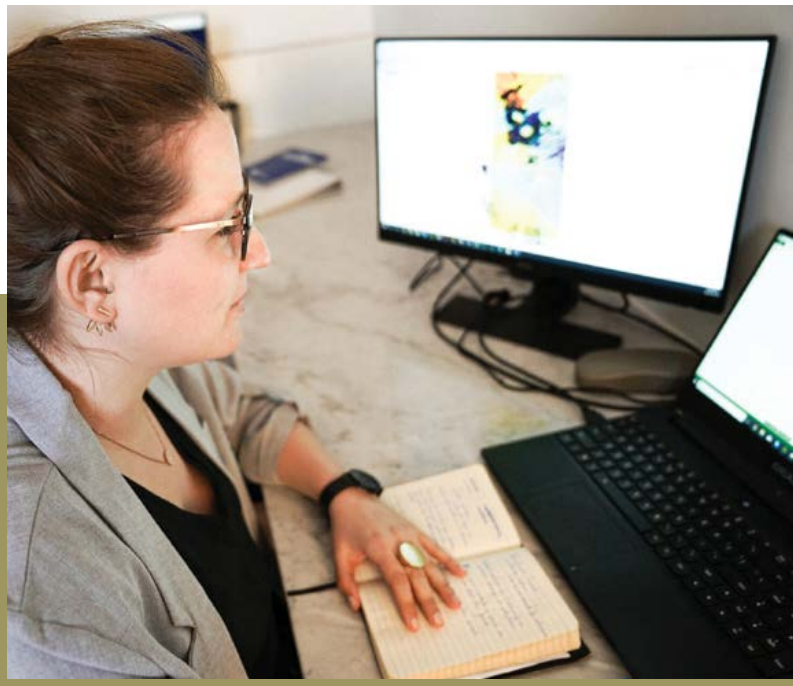
The demonstrated abilities of a student team were combined with the expertise of experienced junior mining business professionals, building a company with a broad approach to creating value. The publicly-listed junior exploration company applies advanced data analytics and machine learning to process geoscience data, identify mineral targets and solve exploration problems.

THE STORY

The original team formed as an alliance spanning the country, a collaboration between students at the Institut National de la Recherche Scientifique (INRS) and the University of British Columbia (UBC). They built a group with diverse backgrounds in order to develop a machine learning solution for the Integra Challenge in 2016.

Initially the team worked as individuals on facets of the data which matched their expertise. Key to success was Vincent Dubé Bourgeois, now COO of GoldSpot, who melded the work and ultimately packaged it for presentation. The independent and youthful nature of a group, with a quality product, attracted the attention of Denis Laviolette and Cejay Kim. The pair of mining business professionals initiated discussions which led to the formation of GoldSpot Discoveries. A corporate structure and initial private investment were followed by a handful of early jobs that produced clients who not only liked the results, but also invested in the company.

Right from the start, a very flat organizational structure was created, aiming to create a culture where everyone wants to be involved and to contribute. Hiring is done based on finding the right people for the culture of the company, but not inserting them directly into an organizational chart. New staff can grow into the positions that fit them best and allows them to add the most value to the group.



At GoldSpot, 27 people are all working hard every day, but there's no reason for them to. There's no whip, right? And the carrot is that we all have a job. And we like it. And to me, that's super cool.

Shawn Hood, GoldSpot Discoveries Corp.

Projects include a variety of commodities and range from 2D regional greenfields targeting and mine camp exploration, to brownfields mine extension, to collaboration with multi-stakeholder research efforts such as Metal Earth at Laurentian University in Sudbury. In addition, internal R&D is continuous and includes close to 40 initiatives. The CEO plays a critical role in keeping the teams' focus and work on track.

The company operates on a flexible basis, from cash for services to investing directly in companies, up to a cap of 9.9% and building their own stock and royalty portfolio. GoldSpot strives to develop collaborative, ongoing relationships and to provide individual and modular solutions to problems.

Data sets are hugely variable, as is the quality of the storage, ranging from mouse eaten and water damaged paper to perfectly formatted and cleaned Excel spreadsheets. Projects may require natural language processing, deep learning photo processors or adaptations of machine learning algorithms. GoldSpot uses its geoscience expertise to do exploratory data analysis, to identify which patterns are useful and which can be cast aside, allowing the group to chisel away to the nugget of the problem. This part of the work can be as much as 75% of the project.

CHALLENGES

Building relationships with clients is important as is developing the right framework for each deal. Some partners or clients may be disinclined to work with a company that also funds its own projects and takes and equity stake in others. By nature, being listed as a junior mining company also requires promotion, which is difficult to balance with demonstrating strong technical capabilities.

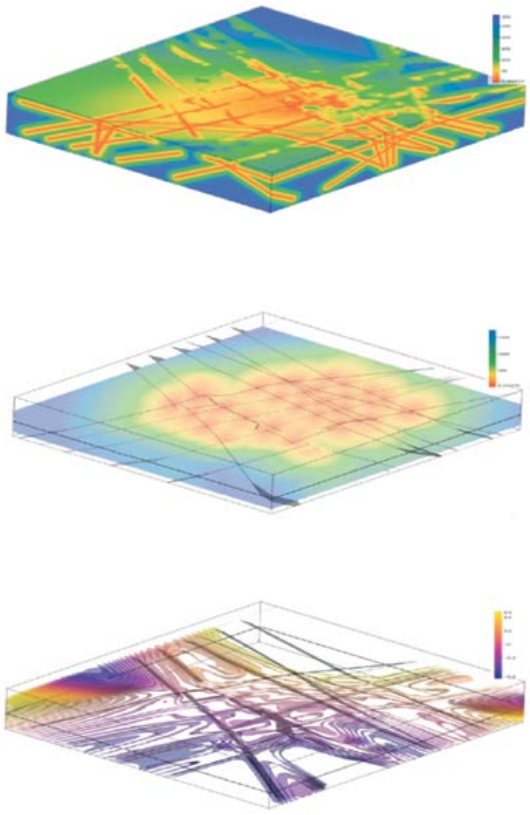
EARLY ADOPTER

While still private, the first consulting assignment was for Sprott Mining Inc., where GoldSpot was deployed on the prolific Jerritt Canyon camp in Nevada.

FUNDING AND SUPPORT

The Integra Challenge was the kick-starter for the eventual formation of GoldSpot Discoveries. Early private investment by Eric Sprott and Hothschild Mining led to Triple Flag, taking the lead order in GoldSpot's $7.5 million go-public financing. U.S. Global Investors bought in and Frank Holmes serves as GoldSpot's Chairman.

Schematic workflow



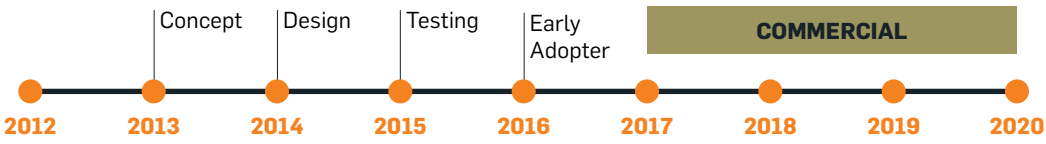
BENEFIT

GoldSpot Discoveries is adapting data analytics, machine learning and AI to create value and target mineralization. The company provides flexible solutions for data-oriented problems, taking advantage of large datasets.

BOTTOM LINE

GoldSpot Discoveries is one of the new exploration companies that is using data analytics, machine learning and AI to create value and target mineralization.

WHY WASTE WATER?



KEY PARTICIPANT
HY-TECH Drilling Ltd

DRIVERS
Environment
Regulations

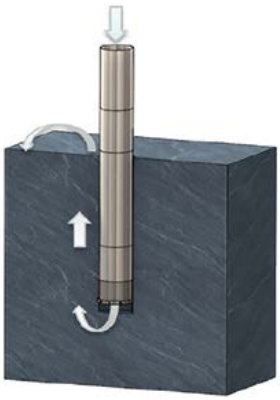
KEY FACTORS
Outside Expertise

WATER USE REDUCTION
577,600 L
2,400 L

THE PROBLEM

Diamond drills consume large amounts of water with on average 577,600 litres used for every 1,000 m drilled. Water is pushed down the hole to cool the bit and move the cuttings back up to the surface. The process facilitates the drilling and recovers a clean core for analysis.

Standard practice is to drill using a continuous new water supply and allow the used water to percolate back into the ground. The cuttings and unconsolidated material from the drill process are typically buried in a large sump dug at the drill site. This approach is becoming unacceptable internationally. Both regulators and communities want to see better practices implemented.



THE INNOVATION

HY-TECH Drilling Ltd. saw the need to design a method of reducing the water use in diamond drilling for mineral exploration. They envisioned a portable, easy to manage and care for system that attaches to a drill and recycles the water, creating a closed-loop. The system functions simply as a 'plug-in' to the drill. Cuttings are removed with a second very high-speed rotating assembly that pushes the solids out and the water is recirculated down the hole, resulting in 90% recovery rates.

THE STORY

In their workshop in Smithers, B.C., HY-TECH Drilling has its own full-time R&D unit of two people—an engineer and an experienced driller who understands the practical applications.

An independent drilling company, HY-TECH manufactures and operates their own drill unit that is lightweight and portable and ideal for challenging locations. Design and innovation are integral to the company and proprietary technology has been developed over many years, including various patented components. Feedback and ideas from the drillers in the field is vital to the process. The first step was to look outside the minerals business for solutions.

The team investigated existing technologies for water treatment such as clarifiers, shaker screens and centrifuges. The benefits to centrifuges became apparent. They realized that this process was already being used in the oil and gas sector, so they went looking for existing solutions. They were able to work from systems already in use and find alternative components of the right scale for diamond drilling. The system was then designed around the centrifuge to create a low interaction 'plug and play' solution.

HY-TECH drill with plug in centrifuge system, onsite in NW British Colombia.

It is extremely beneficial to have a dedicated team in place to evaluate the endless number of ideas that come from our field crews, equipment operators and experienced personnel located in our branch facilities.

Brian Butterworth, HY-TECH Drilling

CHALLENGES

HY-TECH tested units used in the oil/gas drilling systems. Clearly, these were developed for holes that are a magnitude larger than those found in mineral exploration mineral exploration. Bringing the oil and gas equipment into Smithers required two tractor trailer loads; a daunting task. The next step was to find a small centrifuge or rotating assembly and then adapt that to plug and play into their drill equipment, working with the pumps and the rest of the drill equipment. The solution had to be helicopter portable, be intuitive and have a low interaction level from the crew.

Now with a functioning system with 13 units in operation, HY-TECH are working on version 4. The next challenge is to deal more effectively with the very fine clay fraction in the water. A particle size of 2-10 microns limits the processing capacity. Self-cleaning improvements are the next priority, again reducing the interaction level.

Typical sump used for waste water and drill cuttings on-site.

EARLY ADOPTER

One early adopter was Pretivm—they were working with a more advanced project and looking to reduce water consumption and needed to clean the water going to their operations plant. Other clients were working in an area with public viewing and realized that a clean and tidy operation would be positive for both them and the public view.

FUNDING AND SUPPORT

Grants from Industrial Assistance Research Program (IRAP) were key to a positive outcome, providing critical funds to create an encompassing diamond drilling specific solution. Government regulators were also supportive, realizing the benefit of water recycling and recognizing the environmental value.

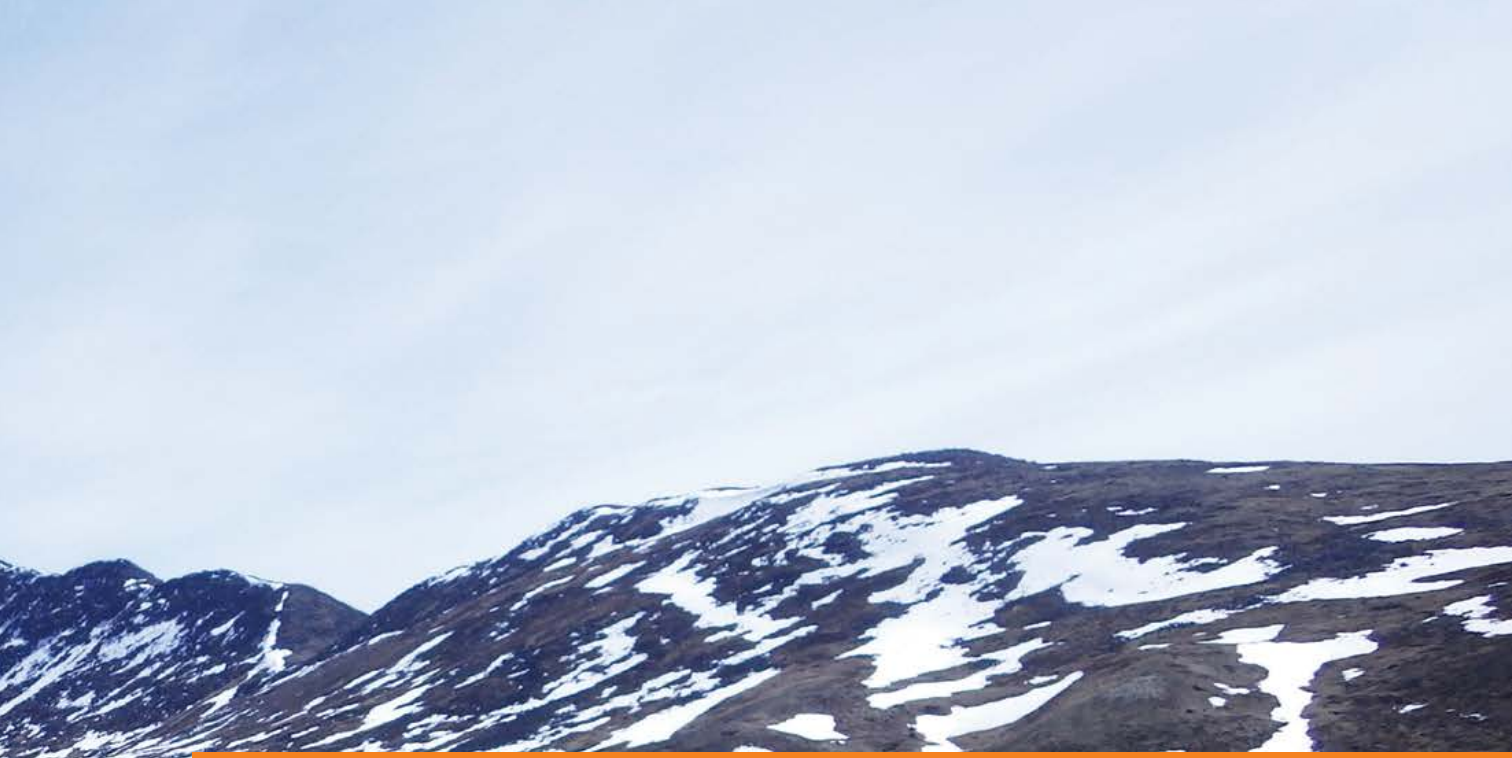
BENEFIT

Companies carrying out mineral exploration can substantially reduce water use. This approach is responsible and environmentally beneficial and can also be helpful in community relations and acquiring government permits. Operating in a more responsible way has big benefits for both clients and HY-TECH, creating better outcomes on the ground and with community relations.

BOTTOM LINE

HY-TECH Drilling has developed a competitive advantage and are able to supply clients globally with an effective water management tool. Currently 13 centrifuge units are in use, creating value for them, their clients and the local areas in which they work.

Waste from closed-loop drilling ready for transport off-site.



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CORE

The Voice of Mineral Exploration
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